I claim:

1. A method for bridging network traffic in a networking device having a plurality of communication interfaces, the method comprising:

creating a bridged routing entry for bridging a first communication interface and a second communication interface before requiring a bridge between the predetermined pair of communication interfaces;

subsequently determining that a bridge is needed between the first communication interface and the second communication interface; and

establishing the bridge between the first communication interface and the second communication interface using the bridged routing entry.

2. The method of claim 1, wherein creating the bridged routing entry for bridging the first communication interface and the second communication interface comprises:

adding the second communication interface as an outgoing interface to a routing entry having the first communication interface as an outgoing interface.

3. The method of claim 2, wherein creating the bridged routing entry for the first communication interface and the second communication interface further comprises:

creating a bridged routing vector for bridging the first communication interface and the second communication interface.

4. The method of claim 1, wherein determining that the bridge is needed between the first communication interface and the second communication interface comprises:

detecting a failure affecting communication over the first communication interface.

5. The method of claim 1, wherein the plurality of communication interfaces comprises a plurality of line cards.

6. A method for bridging network traffic in a networking device having a plurality of communication interfaces, the method comprising:

creating a bridged routing table for bridging a first communication interface and a second communication interface before requiring a bridge between the predetermined pair of communication interfaces;

subsequently determining that a bridge is needed between the first communication interface and the second communication interface; and

establishing the bridge between the first communication interface and the second communication interface using the bridged routing table.

7. The method of claim 6, wherein creating the bridged routing table for bridging the first communication interface and the second communication interface comprises:

finding in a main routing table a number of main routing entries having the first communication interface as an outgoing interface; and

creating in the bridged routing table a corresponding bridged routing entry for each of said number of main routing entries, wherein each bridged routing entry includes all outgoing interfaces from its corresponding main routing entry and further includes the second communication interface as an outgoing interface.

8. The method of claim 7, wherein creating a corresponding bridged routing entry for a main routing entry comprises:

copying the main routing entry as a bridged routing entry into the bridged routing table; and

adding the second communication interface as an outgoing interface to the bridged routing entry.

9. The method of claim 8, wherein creating the corresponding bridged routing entry for the main routing entry comprises:

creating a bridged routing vector for the bridged routing entry.

10. The method of claim 8, wherein creating the corresponding bridged routing entry for the main routing entry comprises:

including in the bridged routing entry a reference to the main routing entry in the main routing table.

11. The method of claim 6, wherein determining that the bridge is needed between the first communication interface and the second communication interface comprises:

detecting a failure affecting communication over the first communication interface.

12. The method of claim 6, wherein the plurality of communication interfaces comprises a plurality of line cards.

13. A method for protection switching in a networking device having a plurality of communication interfaces, the method comprising:

pre-establishing a bridged routing table for each of a number of communication interface pairs, where each communication interface pair represents a working communication interface and a corresponding protection communication interface from among the plurality of communication interfaces;

detecting a failure affecting communication over a working communication interface;

determining a protection communication interface to protect the working communication interface;

obtaining the pre-established bridged routing table for the communication interface pair associated with the working communication interface and the protection communication interface; and

bridging the protection communication interface to the working communication interface using the pre-established bridged routing table for the communication interface pair associated with the working communication interface and the protection communication interface.

14. The method of claim 13, wherein pre-establishing a bridged routing table for a communication interface pair comprises:

finding in a main routing table a number of main routing entries having the working communication interface as an outgoing interface; and

creating in the bridged routing table a corresponding bridged routing entry for each of said number of main routing entries, wherein each bridged routing entry includes all outgoing interfaces from its corresponding main routing entry and further includes the protection communication interface as an outgoing interface.

15. The method of claim 14, wherein creating a corresponding bridged routing entry for a main routing entry comprises:

copying the main routing entry as a bridged routing entry into the bridged routing table; and

adding the protection communication interface as an outgoing interface to the bridged routing entry.

16. The method of claim 15, wherein creating the corresponding bridged routing entry for the main routing entry comprises:

creating a bridged routing vector for the bridged routing entry.

17. The method of claim 15, wherein creating the corresponding bridged routing entry for the main routing entry comprises:

including in the bridged routing entry a reference to the main routing entry in the main routing table.

18. The method of claim 13, wherein the plurality of communication interfaces comprises a plurality of line cards.

19. An apparatus comprising:

a plurality of communication interfaces;

bridge pre-establishment logic operably coupled to create a bridged routing entry for bridging a first communication interface and a second interface from among the plurality of communication interfaces before a bridge is needed between the first communication interface and the second interface; and

bridge establishment logic operably coupled to establish a bridge between the first communication interface and the second communication interface using the pre-established bridged routing entry upon determining that a bridge is needed between the first communication interface and the second communication interface.

20. The apparatus of claim 19, wherein the bridge pre-establishment logic is operably coupled to create the bridged routing entry by adding the second communication interface as an outgoing interface to a routing entry having the first communication interface as an outgoing interface.

21. The apparatus of claim 20, wherein the bridge pre-establishment logic is operably coupled to create a bridged routing vector for bridging the first communication interface and the second communication interface.

22. The apparatus of claim 19, wherein the bridge establishment logic is operably coupled to establish the bridge upon detecting a failure affecting communication over the first communication interface.

23. The apparatus of claim 19, wherein the plurality of communication interfaces comprises a plurality of line cards.

24. A computer program for controlling a computer system, the computer program comprising:

bridge pre-establishment logic programmed to create a bridged routing entry for bridging a first communication interface and a second interface from among a plurality of communication interfaces before a bridge is needed between the first communication interface and the second interface; and

bridge establishment logic programmed to establish a bridge between the first communication interface and the second communication interface using the pre-established bridged routing entry upon determining that a bridge is needed between the first communication interface and the second communication interface.

25. The computer program of claim 24, wherein the bridge pre-establishment logic is programmed to create the bridged routing entry by adding the second communication interface as an outgoing interface to a routing entry having the first communication interface as an outgoing interface.

26. The computer program of claim 25, wherein the bridge pre-establishment logic is programmed to create a bridged routing vector for bridging the first communication interface and the second communication interface.

27. The computer program of claim 24, wherein the bridge establishment logic is programmed to establish the bridge upon detecting a failure affecting communication over the first communication interface.

28. The computer program of claim 24 embodied in a computer readable medium.

29. The computer program of claim 24 embodied in a data signal.

30. An apparatus comprising:

a plurality of communication interfaces;

bridge pre-establishment logic operably coupled to create a bridged routing table for bridging a first communication interface and a second interface from among a plurality of communication interfaces before a bridge is needed between the first communication interface and the second interface; and

bridge establishment logic operably coupled to establish a bridge between the first communication interface and the second communication interface using the pre-established bridged routing table upon determining that a bridge is needed between the first communication interface and the second communication interface.

31. The apparatus of claim 30, wherein the bridge pre-establishment logic is operably coupled to create the bridged routing table by finding in a main routing table a number of main routing entries having the first communication interface as an outgoing interface and creating in the bridged routing table a corresponding bridged routing entry for each of said number of main routing entries, wherein each bridged routing entry includes all outgoing interfaces from its corresponding main routing entry and further includes the second communication interface as an outgoing interface.

32. The apparatus of claim 31, wherein the bridge pre-establishment logic is operably coupled to create a corresponding bridged routing entry for a main routing entry by copying the main routing entry as a bridged routing entry into the bridged routing table and adding the second communication interface as an outgoing interface to the bridged routing entry.

33. The apparatus of claim 32, wherein the bridge pre-establishment logic is operably coupled to create a bridged routing vector for the bridged routing entry.

34. The apparatus of claim 32, wherein the bridge pre-establishment logic is operably coupled to include in the bridged routing entry a reference to the main routing entry in the main routing table.

35. The apparatus of claim 30, wherein the bridge establishment logic is operably coupled to establish the bridge upon detecting a failure affecting communication over the first communication interface.

36. The apparatus of claim 30, wherein the plurality of communication interfaces comprises a plurality of line cards.

37. A computer program for controlling a computer system, the computer program comprising:

bridge pre-establishment logic programmed to create a bridged routing table for bridging a first communication interface and a second interface from among a plurality of communication interfaces before a bridge is needed between the first communication interface and the second interface; and

bridge establishment logic programmed to establish a bridge between the first communication interface and the second communication interface using the pre-established bridged routing table upon determining that a bridge is needed between the first communication interface and the second communication interface.

38. The computer program of claim 37, wherein the bridge pre-establishment logic is programmed to create the bridged routing table by finding in a main routing table a number of main routing entries having the first communication interface as an outgoing interface and creating in the bridged routing table a corresponding bridged routing entry for each of said number of main routing entries, wherein each bridged routing entry includes all outgoing interfaces from its corresponding main routing entry and further includes the second communication interface as an outgoing interface.

39. The computer program of claim 38, wherein the bridge pre-establishment logic is programmed to create a corresponding bridged routing entry for a main routing entry by copying the main routing entry as a bridged routing entry into the bridged routing table and adding the second communication interface as an outgoing interface to the bridged routing entry.

40. The computer program of claim 39, wherein the bridge pre-establishment logic is programmed to create a bridged routing vector for the bridged routing entry.

41. The computer program of claim 39, wherein the bridge pre-establishment logic is programmed to include in the bridged routing entry a reference to the main routing entry in the main routing table.

42. The computer program of claim 37, wherein the bridge establishment logic is programmed to establish the bridge upon detecting a failure affecting communication over the first communication interface.

43. The computer program of claim 37 embodied in a computer readable medium.

44. The computer program of claim 37 embodied in a data signal.

45. An apparatus comprising:

a plurality of communication interfaces;

bridge pre-establishment logic operably coupled to create a bridged routing table for each of a number of communication interface pairs, where each communication interface pair represents a working communication interface and a corresponding protection communication interface from among the plurality of communication interfaces; and

bridge establishment logic operably coupled to establish a bridge between a working communication interface and a corresponding protection communication interface using the bridged routing table associated with the working communication interface and corresponding protection communication interface upon detecting a failure affecting communication over the working communication interface.

46. The apparatus of claim 45, wherein the bridge pre-establishment logic is operably coupled to create a bridged routing table for a communication interface pair by finding in a main routing table a number of main routing entries having the working communication interface as an outgoing interface and creating in the bridged routing table a corresponding bridged routing entry for each of said number of main routing entries, wherein each bridged routing entry includes all outgoing interfaces from its corresponding main routing entry and further includes the protection communication interface as an outgoing interface.

47. The apparatus of claim 46, wherein the bridge pre-establishment logic is operably coupled to create a corresponding bridged routing entry for a main routing entry by copying the main routing entry as a bridged routing entry into the bridged routing table and adding the protection communication interface as an outgoing interface to the bridged routing entry.

48. The apparatus of claim 47, wherein the bridge pre-establishment logic is operably coupled to create a bridged routing vector for the bridged routing entry.

49. The apparatus of claim 47, wherein the bridge pre-establishment logic is operably coupled to include in the bridged routing entry a reference to the main routing entry in the main routing table.

50. The apparatus of claim 45, wherein the plurality of communication interfaces comprises a plurality of line cards.

51. A computer program for controlling a computer system, the computer program comprising:

bridge pre-establishment logic programmed to create a bridged routing table for each of a number of communication interface pairs, where each communication interface pair represents a working communication interface and a corresponding protection communication interface from among the plurality of communication interfaces; and

bridge establishment logic programmed to establish a bridge between a working communication interface and a corresponding protection communication interface using the bridged routing table associated with the working communication interface and corresponding protection communication interface upon detecting a failure affecting communication over the working communication interface.

52. The computer program of claim 51, wherein the bridge pre-establishment logic is programmed to create a bridged routing table for a communication interface pair by finding in a main routing table a number of main routing entries having the working communication interface as an outgoing interface and creating in the bridged routing table a corresponding bridged routing entry for each of said number of main routing entries, wherein each bridged routing entry includes all outgoing interfaces from its corresponding main routing entry and further includes the protection communication interface as an outgoing interface.

53. The computer program of claim 52, wherein the bridge pre-establishment logic is programmed to create a corresponding bridged routing entry for a main routing entry by copying the main routing entry as a bridged routing entry into the bridged routing table and adding the protection communication interface as an outgoing interface to the bridged routing entry.

54. The computer program of claim 53, wherein the bridge pre-establishment logic is programmed to create a bridged routing vector for the bridged routing entry.

55. The computer program of claim 53, wherein the bridge pre-establishment logic is programmed to include in the bridged routing entry a reference to the main routing entry in the main routing table.

56. The computer program of claim 51 embodied in a computer readable medium.

57. The computer program of claim 51 embodied in a data signal.